

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A reef artifact for diminishing the shock of a water current or wave, comprising:

a reef-like formation having a varied surface; and

a connector configured to mount the reef-like formation on a structure, wherein the structure is at least partially submerged in water and receives a shock from water moving toward the structure, the reef-like formation being configured to disrupt the flow of the water adjacent thereto such that the reef-like formation absorbs at least a portion of the shock of the water moving toward the structure.

2. (Withdrawn) A reef artifact as in claim 1, wherein the connector is a bracket.

3. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation defines at least one aperture where water can flow therethrough.

4. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation is further configured to be mounted with a desired amount of space between the reef-like formation and the structure such that water can flow therebetween.

5. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation is generally flat.

6. (Withdrawn) A reef artifact as in claim 1, wherein the varied surface simulates the contours of coral.

7. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation has reef-organism structures thereon.

8. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation comprises a calcium carbonate based concrete.

9. (Withdrawn) A reef artifact as in claim 1, wherein the reef-like formation comprises a compressed concrete and synthetic fibers.

10. (Withdrawn) A reef artifact assembly comprising a plurality of reef artifacts according to claim 1, the plurality of reef artifacts being mounted to a structure, wherein the structure comprises a wall.

11. (Withdrawn) A reef artifact assembly as in claim 10, wherein each of the reef artifacts are mounted below a water surface.

12. (Withdrawn) A reef artifact designed to simulate a naturally occurring reef, comprising:

a reef-like formation having a varied surface with contours that have the appearance of coral; and

at least one reef-organism structure formed on said reef-like formation.

13. (Withdrawn) A reef artifact as in claim 12, further comprising a plurality of a reef-organism structures.

14. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure has the appearance of reef organism.

15. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure is a simulated reef organism.

16. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure is a naturally-occurring reef organism.

17. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure has the appearance of a fish.

18. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure has the appearance of a starfish.

19. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure has the appearance of a shell.

20. (Withdrawn) A reef artifact as in claim 12, wherein the at least one reef-organism structure has an appearance selected from the group consisting of a fish, a shell, a crab, an octopus, a sea horse, a plant, a starfish, and combinations thereof.

21. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation is configured to be mounted on a structure.

22. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation is configured to stand alone.

23. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation defines at least one aperture where water can flow therethrough.

24. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation is further configured to be mounted with a desired amount of space between the reef-like formation and the structure such that small marine animals can fit therebetween.

25. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation is generally flat.

26. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation comprises a calcium carbonate based concrete.

27. (Withdrawn) A reef artifact as in claim 12, wherein the reef-like formation comprises a concrete and a synthetic fiber.

28. (Withdrawn) A reef artifact assembly comprising a plurality of reef artifacts according to claim 12, wherein the plurality of reef artifacts are mounted below a water surface.

29. (Withdrawn) A reef artifact assembly comprising a plurality of reef artifacts according to claim 28, wherein the reef artifacts are mounted between about 2 feet and about 10 feet below the water surface.

30. (Currently Amended) A method for making a reef artifact mold comprising:
providing a reef-like formation having a varied surface;
providing at least one reef-organism structure;
adhering the at least one reef-organism structure to the reef-like formation to
produce a reef artifact form wherein the reef organism structure is a molded reef
organism structure that simulates a naturally occurring reef organism structure; and
making a reef artifact mold using said reef artifact form, wherein providing at
least one reef-organism structure comprises forming at least one reef-organism structure,
and wherein forming at least one reef-organism structure comprises:
selecting at least one dehydrated reef organism, wherein the dehydrated
reef organism comprises a dehydrated marine animal;
forming a mold of the at least one dehydrated reef organism; and
molding at least one reef-organism structure.
31. (Original) A method according to claim 30, wherein the at least one reef-organism
structure simulates a naturally occurring reef organism.
32. (Currently Amended) A method according to claim 30, wherein ~~the at least one
reef-organism structure is a molded reef-organism structure that simulates a naturally occurring
reef organism~~ dehydrated reef organism is selected from the group consisting of a seahorse,
urchin, crab, squid, starfish, octopus, and fish.
33. (Currently Amended) A method according to claim 30, wherein ~~the at least one
reef-organism structure is a naturally occurring reef organism~~ dehydrated reef organism is
selected from the group consisting of a seahorse, urchin, crab, squid, and starfish.
34. (Original) A method according to claim 30, wherein providing the reef-like
formation comprises selecting or cutting travertine stone.

35. (Original) A method according to claim 30, further comprising adhering a plurality of reef-organism structures to the reef-like formation.

36. (Original) A method according to claim 35, wherein providing the plurality of reef-organism structures comprises:

selecting a plurality of dehydrated reef organisms;

forming a rubber negative mold of each of the plurality of dehydrated reef organisms; and

pouring a wax into each of the rubber negative molds to form the plurality of reef-organism structures.

37. (Original) A method according to claim 36, wherein adhering the reef-organism structures to the reef-like formation comprises melting a surface layer of wax of each of the reef-organism structures and adhering each of the reef-organism structures to the reef-like formation before the melted wax hardens.

38. (Original) A method of making a reef artifact according to claim 30 further comprising, (i) pouring a moldable material into the reef artifact mold and (ii) allowing the moldable material to harden to form a reef article, and removing the reef artifact from the reef artifact mold.

39. (Original) A method of making a reef artifact assembly according to claim 35 further comprising, repeating steps (i) and (ii) to form a plurality of reef artifacts and mounting the plurality of reef artifacts on a structure.

40. (Original) A method according to claim 39, wherein mounting the plurality of reef artifacts on the structure further comprises:

drilling a plurality of holes in the structure with a desired spacing for mounting the plurality of reef artifacts thereon;

inserting a bolt into the hole and using a marine epoxy to permanently fix the bolt in the hole; and

mounting the reef artifacts on the bolts.

41. (Original) A method according to claim 39, wherein each of the plurality of reef artifacts is mounted between about 2 and about 10 feet below a water surface.

42. (Original) A method according to claim 39, wherein step (i) further comprises partially inserting a mounting bracket into the moldable material.

43. (Original) A method according to claim 42, wherein each of the plurality of reef artifacts is mounted with a desired amount of space between the structure and the reef artifact such that small marine animals can fit therebetween.

44. (Original) A method as in claim 42, wherein the moldable material is concrete.

45. (Original) A method as in claim 44, wherein the concrete comprises calcium carbonate.

46. (Previously Presented) A method as in claim 30, further comprising pouring a concrete mixture into the mold, forming a reef artifact by allowing the concrete mixture to cure, and removing the mold to yield a reef artifact.

47. (Currently Amended) A method for manufacturing a reef artifact suitable for use in an aquatic environment, wherein the reef artifact is configured to be mounted on a structure that is at least partially submerged in water and receives a shock from water moving toward the structure, the reef artifact being configured to disrupt the flow of the water adjacent thereto such that the reef artifact absorbs at least a portion of the shock of the water moving toward the structure, the method of manufacturing the structure comprising:

providing a reef-like formation having a varied surface;

forming at least one reef-organism structure, wherein forming at least one reef-organism structure comprises:

selecting at least one real or simulated reef organism;

forming a mold of each of the at least one real or simulated reef organism;

and

molding at least one reef-organism structure;

adhering the at least one reef-organism structure to the reef-like formation to produce a reef artifact form;

making a reef artifact mold using the reef artifact form;

pouring a moldable material into the mold;

partially inserting a mounting bracket into the moldable material, the mounting bracket configured to mount the reef artifact on a structure that is at least partially submerged in water and receives a shock from water moving toward the structure; and

allowing the moldable material to harden.

48. (Previously Presented) A method as in claim 47, wherein forming the reef organism structures comprises forming a plurality of reef-organism structures from a plurality of negative molds.

49. (Previously Presented) A method as in claim 47, wherein the steps of pouring concrete and removing the mold is repeated a plurality of times to make a plurality of reef artifacts.

50. (Currently Amended) A method for manufacturing a reef artifact suitable for use in an aquatic environment, comprising:

providing a reef-like formation having a varied surface;

providing a plurality of molded reef-organism structures that simulate a real reef organism wherein providing a plurality of molded reef-organism structures that simulates a real reef organism comprises:

selecting a plurality of dehydrated reef organisms, each of the dehydrated reef organisms comprising a dehydrated marine animal;

forming a rubber negative mold of each of the plurality of dehydrated reef organisms;

pouring a wax into each of the rubber negative molds to form the plurality of reef-organism structures;

adhering the at least one reef-organism structure to the reef-like formation to produce a reef artifact form;

making a reef artifact mold using the reef artifact form; and

pouring a concrete mixture into the mold and allowing the concrete mixture to harden.

51. (New) A method for manufacturing and mounting a reef artifact suitable for use in an aquatic environment, wherein the reef artifact is configured to be mounted on a structure that is at least partially submerged in water and receives a shock from water moving toward the structure, the reef artifact being configured to disrupt the flow of the water adjacent thereto such that the reef artifact absorbs at least a portion of the shock of the water moving toward the structure, the method of manufacturing the reef artifact comprising:

providing a reef-like formation having a varied surface;

forming at least one reef-organism structure, wherein forming at least one reef-organism structure comprises:

selecting at least one real or simulated reef organism;

forming a mold of each of the at least one real or simulated reef organism;

and

molding at least one reef-organism structure;

adhering the at least one reef-organism structure to the reef-like formation to produce a reef artifact form;

making a reef artifact mold using the reef artifact form;

pouring a moldable material into the mold;

partially inserting a mounting bracket into the moldable material, the mounting bracket configured to mount the reef artifact on a structure;

allowing the moldable material to harden, thereby forming a reef artifact suitable for mounting in an aquatic environment; and

mounting the reef artifact on a structure that is at least partially submerged in water and receives a shock from water moving toward the structure, the reef artifact being configured to disrupt the flow of the water adjacent thereto such that the reef artifact absorbs at least a portion of the shock of the water moving toward the structure.

52. (New) A method as recited in claim 51, wherein selecting at least one real or simulated reef organism comprises selecting a marine animal.

53. (New) A method as recited in claim 47, wherein the reef artifact has a substantially flat back and the mounting bracket extends from the substantially flat back.